

REMARKS

Claims 26-42 are pending in the subject application. Applicant respectfully requests that the amendments to claims 26, 29, 31, 35, 37 and 39 be entered. Applicant respectfully submits that the amendments to claims 26, 29, 31, 35, 37 and 39 more clearly define Applicants' invention and distinguish it over the prior art of record. Applicant respectfully submits that the amendments do not introduce limitations which require further search by the Examiner. No new matter has been added to the application by virtue of the present amendment.

Claim Rejections – 35 U.S.C. 102 (b)

The Examiner has rejected claims 26, 28, 35, 37-39 and 41-42 under 35 U.S.C. 102(b) as being anticipated by Beasom (U.S. Patent No. 5,841,169).

Applicant has amended claim 26 to more clearly distinguish Applicant's claimed invention over Beasom. For example, referring to FIG. 1 of the application, doped regions 12, 14 and 20 are formed on an original substrate 10. No portion of the original substrate 10 is removed and replaced with another substrate material when forming doped regions 12, 14 and 20 (see paragraph 0035). Thus, the doped regions 12, 14 and 20 are formed on the original substrate 10 and no part of the original substrate is removed and replaced with another substrate material which is then used to form a "modified" substrate.

Beasom does not anticipate or suggest Applicant's claim 26, as amended, and claims dependent thereupon. Referring to column 4, lines 14-53 and FIG. 2 of Beasom, Beasom teaches a method of etching an original single crystal substrate to remove entire portions of the original substrate to form trenches with a tapered shape outside of single crystal substrate regions where devices are to be formed. Oxide layers 209, 211, 219 are then formed on sidewalls (and bottom) of the trenches. The trenches are then filled with polysilicon to form a "new" substrate surrounding the single crystal device regions (i.e. 202, 212). Doped regions (ie. 202-207, 212-217) are then formed in the single crystal device regions. Thus, Beasom removes entire portions of the original single crystal substrate surrounding single crystal substrate regions in which devices are subsequently formed and replaces the removed original single crystal substrate

portions with another substrate material (e.g. polysilicon). Beasom explicitly states that the polysilicon "... will ultimately serve as the integrated circuit substrate" (column 4, lines 36-37). Beasom is silent on forming doped regions on an original substrate without removing any portion of the original substrate and replacing with another substrate material. The method of Beasom adds process complexity and cost due to the additional removal and substitution steps to form the polysilicon substrate 201.

Applicant's claim 26 has also been amended to include the limitation of "... forming a plurality of isolation regions in said original substrate ...". Beasom is silent on forming a plurality of isolation regions in the original substrate. As discussed above, Beasom discloses etching an original single crystal substrate to remove entire portions of the original substrate to form trenches with a tapered shape outside of single crystal substrate regions where devices are to be formed; forming oxide layers 209, 211, 219 on sidewalls (and bottom) of the trenches; and filling the trenches with polysilicon to form a "new" substrate surrounding the single crystal device regions (i.e. 202, 212). Thus, Beasom discloses forming isolation regions 209, 211, 219 on sidewalls of an original substrate and not in the original substrate.

Therefore, Applicant believes the rejections to the claims under 35 U.S.C. 102(b) have been overcome.

Claim Rejections – 35 U.S.C. 103 (a)

The Examiner has rejected claims 29 and 31-33 under 35 U.S.C. 103(a) as being unpatentable over Beasom (U.S. Patent No. 5,841,169); claims 27 and 30 under 35 U.S.C. 103(a) as being unpatentable over Beasom in view of Mack et al. (U.S. Patent No. 4,736,271); and claims 34, 36 and 40 under 35 U.S.C. 103(a) as being unpatentable over Beasom in view of Robinson et al. (U.S. Patent No. 5,268,316).

As discussed above, Applicant respectfully submits that Beasom, individually or in combination with Mack et al. or Robinson et al., does not teach or suggest Applicant's claim 26, as amended, or claims dependent thereupon.

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Therefore, Applicant believes the rejections to the claims under 35 U.S.C. 103(a) have been overcome.

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CONCLUSION

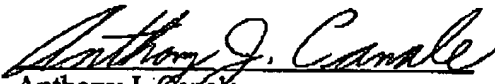
In light of the foregoing amendments and remarks, all of the claims now presented are believed to be in condition for allowance, and Applicant respectfully requests that the outstanding rejections be withdrawn and this application be passed to issue at an early date.

The Examiner is urged to call the undersigned at the number listed below if, in the Examiner's opinion, such a phone conference would aid in furthering the prosecution of this application. No fee is due by virtue of this amendment. However, if the PTO determines that a fee is required, please charge Applicant's Deposit Account, 09-0456. If any extensions or fees are not accounted for, such extension is requested and the associated fee should be charged to our deposit account.

Respectfully Submitted,

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